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**Combination comprising a pasty food and a package**

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(54) Title  
**COMBINATION COMPRISING A PASTY FOOD AND A PACKAGE**  
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(51)<sup>6</sup> A23L 001/24 A23L 001/221  
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(57) Claim

## ABSTRACT

The invention relates to a combination of food and symmetrical package (1), the package containing a food having at least two components (3), (4), containing in each case one of these components alternating along the axis of symmetry and these 5 components having a Bostwick viscosity between 40 and 60 mm.

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# AUSTRALIA

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## PATENTS ACT 1990

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### COMPLETE SPECIFICATION

FOR A STANDARD PATENT

ORIGINAL

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Invention Title: "COMBINATION COMPRISING A PASTY FOOD AND  
A PACKAGE"

The following statement is a full description of this invention, including the best method of  
performing it known to us:-

### Combination comprising a pasty food and a package

The invention relates to a combination comprising a pasty food and a symmetrical package which contains a food having at least two components and which contains in each case one of these components alternating along the axis of symmetry.

5 French Patent No. 2248023 already relates to a package of this type having two different components, which comprise a fatty phase and an aqueous phase. However, this patent is restricted to the cosmetics sector. A gelation process of the product is utilized in the package with the aid of a mould piece to be removed subsequently.

The object underlying the invention is to have a combination available which  
10 contains a food having at least two components separately. Storage trials have shown that all products filled as two or more phases have a flavour advantage in comparison to mixed versions having an identical formula. In product combinations of this type, however, special adaptations of the formula are necessary. For example, possible migration processes can be prevented by exchanging oil-soluble colorants for water-  
15 soluble colorants.

According to a first aspect the present invention provides an assemblage providing a composite food product comprising a container having a body which extends to a container opening with an interior axis of symmetry which extends from a position with respect to the container opening to an opposing container base, and at least two food-  
20 component phases which are contained within the container, a first food-component phase comprising a food substance and a water constituent and a second food-component phase comprising a food substance and oil and water constituents, the oil being present in an amount of from 10% to 80% by weight, wherein the food-component phases have a



Bostwick viscosity between 40 mm and 60 mm and are arranged symmetrically with respect to the axis and to contact one another side-by-side.

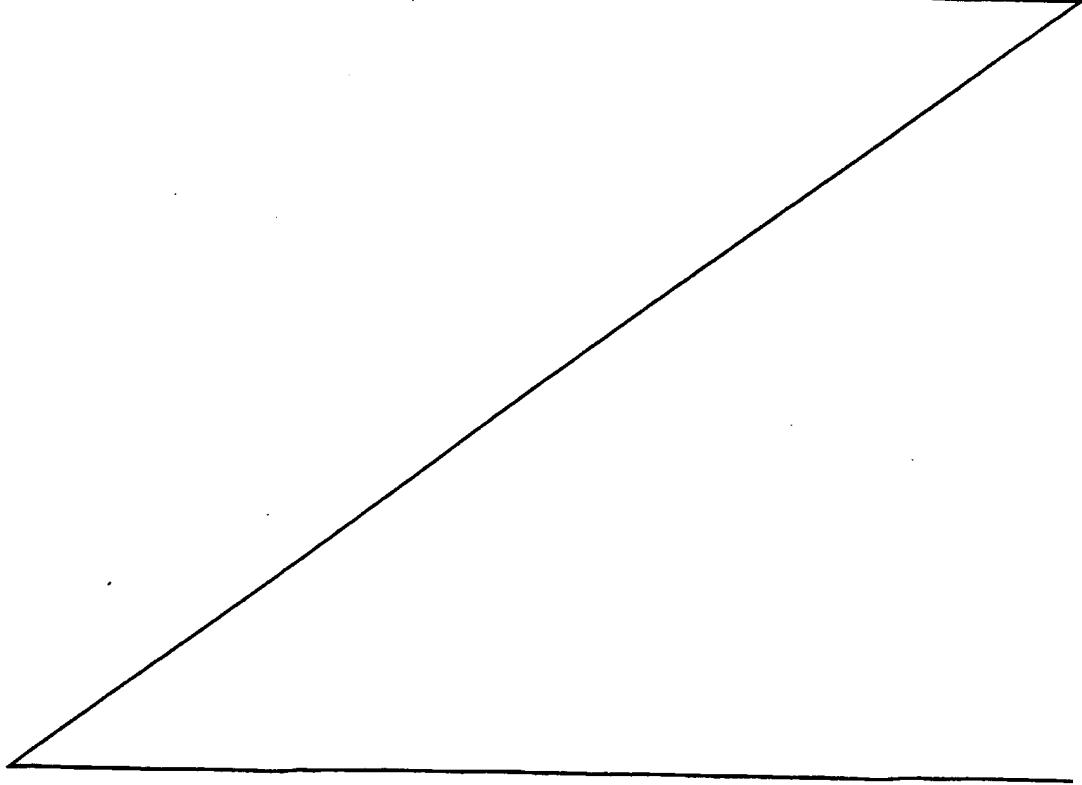
Unless the context clearly requires otherwise, throughout the description and the claims, the words 'comprise', 'comprising', and the like are to be construed in an inclusive sense as opposed to an exclusive or exhaustive sense; that is to say, in the sense of "including, but not limited to".

Bostwick viscosity is taken to mean the measurement of the flow path of a product in the course of 30 seconds at 20°C. This measurement is carried out with an instrument from Kinematica AG (Littau, Switzerland).

10 Pasty foods are taken to mean those foods which fall into the abovementioned viscosity range. Preferably, a combination of mayonnaise and a seasoning phase is used.

The symmetrical package is either a glass package or a plastic package, for example made of poly(ethylene terephthalate) or a tube package.

According to the invention, the number of the



components is not critical: at least two components are employed. Preferably, two components are available: for example, more likely, an oily and an aqueous phase. The combination mayonnaise with a seasoning phase is particularly preferred.

In order to achieve an optimal phase separation, a certain viscosity of the two phases must be achieved. Studies have shown that at too low a viscosity the phases run into one another and thus mix. If the viscosity is too high, air inclusions between the phases occur and the phases do not lie smoothly on one another. On the other hand, the miscibility of the two phases is problematic in the application, i.e. the phases may be stirred together only with difficulty. Furthermore, it has been found that the filling operation is likewise highly dependent on the viscosity.

As already mentioned above, the product texture and the optimum filling operation are achieved when the two components have a Bostwick viscosity between 40 and 60 mm. In the case of a combination mayonnaise/seasoning phase, a Bostwick viscosity of 40-50 mm is selected for the two phases.

The two components are filled in different types of shapes, such as spiral, in layers or vertically next to one another. Preference is given to spiral filling, in order to increase the optical attractiveness. However, this type of filling is not critical: many variations are possible. If layers are filled, the conditions are the same as mentioned above, i.e. the Bostwick viscosity of the two phases is between 40 mm and 60 mm.

The number of zones of the two components is likewise not critical: three or more zones each may be employed. Preferably, there are two, three or four zones for each component.

As far as the composition is concerned, the mayonnaise contains between 10 and 80% of oil and the seasoning phase between 0 and 70% of oil, between 4 and 50% of water and between 0.2 and 6% of starch.

The seasoning phase comprises a base of vegetable

puree, fruit puree and other seasoning constituents, such as mustard in ground form or in the form of grains. The seasoning phase can also contain pieces, both vegetables and fruits, the size of the pieces being between 1 and 5 mm. The foodstuff comprises 20-80% mayonnaise and 80-20% seasoning phase, and is preferably made up of a approximately 50% of mayonnaise and approximately 50% of the seasoning phase.

10 The two-phase products are generally rated fresher, less acidic and more aromatic in comparison to a product filled in a mixed state.

15 The ingredients for the seasoning phase are mixed, pasteurized and recooled. These steps are necessary in order to ensure the microbiological safety and 20 resistance to spoilage of the products. In addition, a heating step is necessary in order to gelatinize the modified starch.

25 As far as the mayonnaise is concerned, it is prepared in a conventional manner. The pH of the two components is in the acidic range, i.e. between 2.8 and 5.

The combinations of the invention can be stored without refrigeration for at least 12 months.

30 The two-phase products developed are packaged in jars by means of a coextrusion feeder which is equipped with piston valves. The products are filled in different types of shapes via a plurality of rotating nozzles with simultaneous lowering of the jar. This will be implemented industrially by means of longitudinally running feed belts and fillers connected in parallel.

The invention is now described in more detail in association with the drawings, where

Fig. 1 shows a diagrammatic representation of the package and

35 Fig. 2 shows a section along line A-A of Fig. 1.

The package (1) has a screwed-on lid (2) and

contains a product having two components (3) and (4). These components are filled in a spiral shape through an angle of 300°. The seasoning phase (3) comprises a base of tomatoes/squash and the mayonnaise (4) contains 50% oil.

The invention is now described in more detail in association with the examples, the ratio mayonnaise/seasoning phase being 50/50.

**Example**

10 **A. Mayonnaise**

A mayonnaise is used having the following composition (%)

10	Oil content	50
15	Egg yolk content	1.5
15	Seasoning constituents	3
20	Vinegar content 11%	4
20	Salt content	2
20	Starch content	2.2
20	Sugar content	9.2
20	Water content	28.1

The mayonnaise has a Bostwick viscosity of 50 mm.

**B. Seasoning phase.**

For the seasoning phase, 5 variants are listed which have a consistency like the mayonnaise phase used.

25 For all of these examples, the Bostwick viscosity was set to 40-50 mm. The contents are all in %.

Constituents	Mexicana	T mato/ squash	Green sauce	Mustard	Exotica
Vegetable puree	12	18	5	28 (mustard)	25 (fruit content)
Vegetable pieces/ herbs	17	35.1	15.6	0	0
5 Fat content	15	0	20	15.0	0
Starch content	3.6	2.6	3.5	0.2	4
Sugar content	12	12	8.5	6	21
Vinegar content 11%	4.8	7.5	4.6	9.0	5.5
10 Salt content	3.8	2.2	2.8	3.5	0.4
Flavouring constituents	2	0.1	6	0.2	0.5
Water content	29.8	22.5	34	38.1	43.6

15 Each of these components is then filled together  
with the mayonnaise at 50-50 on a hygienic line.

THE CLAIMS DEFINITION THE INVENTION ARE AS FOLLOWS:

1. An assemblage providing a composite food product comprising a container having a body which extends to a container opening with an interior axis of symmetry which extends from a position with respect to the container opening to an opposing container base, and at least two food-component phases which are contained within the container, a first food-component phase comprising a food substance and a water constituent and a second food-component phase comprising a food substance and oil and water constituents, the oil being present in an amount of from 10% to 80% by weight, wherein the food-component phases have a Bostwick viscosity between 40 mm and 60 mm and 10 are arranged symmetrically with respect to the axis and to contact one another side-by-side.
2. An assemblage according to claim 1 wherein the second food component phase is a mayonnaise.
3. An assemblage according to claim 1 or 2 wherein the first food component phase 15 is an aqueous phase.
4. An assemblage according to claim 3 wherein the first food-component phase further comprises a starch constituent.
5. An assemblage according to claim 4 wherein the starch is a modified starch.
6. An assemblage according to claim 4 wherein the starch is in an amount of between 20 0.2% and 6% by weight.
7. An assemblage according to claim 1 or 2 wherein the first food substance is selected from the group consisting of a vegetable puree, a fruit puree, vegetable pieces, fruit pieces and a mustard.



8. An assemblage according to claim 7 wherein the first food-component phase further comprises a modified starch constituent.
9. An assemblage according to claim 1 or 2 wherein the first food-component phase further comprises an oil and the oil is in an amount of up to 70% by weight and the water constituent is in an amount of between 4% and 50% by weight.
10. An assemblage according to claim 9 wherein the first food-component phase is a mustard.
11. An assemblage according to claim 7 wherein the first food-component phase further comprises an oil and the oil is in an amount of up to 70% by weight and the water constituent is in an amount of between 4% and 50% by weight.
12. An assemblage according to claim 11 wherein the first food-component phase further comprises a starch.
13. An assemblage according to claim 1 wherein, with respect to a cross-section of the two food-component phases perpendicular to the container interior axis of symmetry, the two food-component phases are arranged side-by-side.
14. An assemblage according to claim 13 wherein the two food-component phases are arranged so that there are two first food-component phase zones and two second food-component phase zones which alternate.
15. An assemblage according to claim 1 wherein the side-by-side phases are arranged in a spiral form wherein the container interior axis of symmetry is an axis of the spiral form.



16. An assemblage comprising a pasty food and a symmetrical package, substantially as herein described with reference to the example or any one of the accompanying drawings.

DATED this 29th Day of September, 1999

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